"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOW, P.P. [Budnikov, P.P.], prof.dr. (Moskva); CHOLIN, I.I. [Kholin, I.I.]; ENTIN, Z.B.

Measuring the numbers of cations transferred in the liquid phase of portland clinker. Cement wapno gips 17 no.5:123-125 My '62.

1. Czlonek rzeczywisty Polskiej Akademii Nauk, Warszawa.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; KESHISHYAN, T.N.; YANOVSKIY, V.K.

Methods of measuring the electric conductivity of ceramic materials at high temperatures. Ogenupory 27 no.5:226-230 '62. (MIRA 15:7)

1. Khimiko-tekhnologicheskiy institut im. Mendeleyeva.
(Electric conductivity—Measurement)
(Ceramic materials—Electric properties)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; SAVEL'YEV, V.G.

Refractory concrete with barium-aluminate binding. Ogneupory 27 no.9:412-417 '62. (MIRA 15:8)

1. Khimiko-tekhnologicheskiy institut im. Mendeleyeva.
(Refactory concrete) (Barium aluminate)

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5

CERAMICS, EUROPEAN ASSOCIATION OF - Eighth International Ceramic Congress - Copenhagen, Denmark, 21-25 May 62

BUDNIKOV, Petr P., Corresponding Member of the Academy of Sciences U.S.S.R., Professor and Head, Chair of General Silicate Technology, Moscow Chemical Technology Institute imeni D. I. Mendeleyev - "Mullite-carborundum and corundum-carborundum refractories resistant to spalling" (Section II)

TORPOV, Nikita A., BONDAR, I. A., and GALAKHOV, F. Ya., Institute of Chemistry of Silicates, Academy of Sciences USSR- "Solid high temperature silicate solutions of rare earth elements" (Section I)

TOMANEK, Vladimir, Dipl. Ing., Dr., Prague- "New criteria for the evaluation of refractory clay and slate" (Section II)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P. P.; SAVEL'YEV, V. G.

Hydration of monobarium aluminate. Izv. vys. ucheb. zav.; khim. i khim. tekh. 5 no.5:793-799 '62.
(MIRA 16:1)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva, kafedra obshchey tekhnologii silikatov.

(Barium aluminates)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; KUZNETSOVA, I.P.

Effect of gypsum on mineral formation in a cement clinker.
Zhur.prikl.khim. 35 no.5:939-943 My '62. (MIRA 15:5)
(Gypsum) (Minerals) (Cement)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

S/080/62/035/006/001/
D204/D307

AUTHORS: Budnikov, P.P., Keshishyan, T. N. and Volkova, A. V.

TITLE: Kinetics of the formation of mullite from technical alumina and silica

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 6, 1962, 1171-1175

TEXT: The present work was carried out to determine the temperature conditions for the formation of mullite in bodies containing vein quartz or silicic acid and technical alumina fired at 1100°C, the temperature at which mullitization first begins and the quantity of mullite formed at various temperatures. The starting materials were finely powdered and were cold-pressed into discs corresponding in composition to $3Al_2O_3.2SiO_2$. The samples were then heated for 2.5 hours in a horizontal tubular furnace with a axial temperature gradient (from 200 to 1600°C) so that a series temperatures could be tested in a single firing. Examination

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

S/080/62/035/010/002/012
D204/D307

AUTHORS: Budnikov, P.P. and Kushakovskiy, V.I.

TITLE: The Al_2O_3 - SiO_2 system

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 10, 1962, 2146-2156

TEXT: The above system was studied to complement the published data. The liquidus temperatures were calculated theoretically for the systems Al_2O_3 - SiO_2, $2Al_2O_3 \cdot SiO_2$ - SiO_2 and $3Al_2O_3 \cdot 2SiO_2$ - SiO_2 and were measured for mixtures containing 100 - 10 wt. % Al_2O_3, by high temperature thermal analysis. The shape of the heating and cooling curves is discussed. Compositions of 50 - 100% Al_2O_3 were essentially at equilibrium, while those of 10 - 30% Al_2O_3 showed supercooling. The liquidus temperatures were considerably lower than those found by Bowen and Greig. Microscopic and X-ray analyses showed the following phases to be present: 100 - 95

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S/080/62/035/010/002/012
D204/D307

The Al_2O_3 - SiO_2 system

Al_2O_3 - corundum; 90- 78 Al_2O_3 - dendritic corundum; 76 - 71.8 Al_2O_3 - mullite with increasing amount of glass; 60 - 50 Al_2O_3 - dendritic and acicular mullite in a glassy matrix. Corundum crystallized out first when 100 - 79 wt % Al_2O_3 samples were cooled, and mullite was first when the Al_2O_3 content fell to 77.5 - 30%, by weight. The crystallization of various mixtures is discussed. The minimum quantity of glass corresponds to the composition $2Al_2O_3 \cdot SiO_2$; the glass content increases slowly when Al_2O_3 is lowered from 77 to 68%, and rises rapidly when Al_2O_3 is lowered from 68 to 60%. From samples containing 68 - 76% Al_2O_3 mullite crystallized out at 1850 - 1870°C, showing it to be stable up to the m.p.; the same crystallized at 1825°C from a composition of 60% Al_2O_3. The mullite-corundum eutectic, containing 78% Al_2O_3, melted at ~ 1840°C. Compositions containing 69 - 70% Al_2O_3 were heated at 1830°C over 1 - 8 hours and quenched. The exterior layer consisted of finely crystalline corundum, while the center was mullite and glass; mullite decomposes at the above temperature, with loss of silica by volatilization. On heating a mixture of SiO_2 and Al_2O_3 (10% of the

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

latter by weight), a liquid phase was first observed at 1550°C, corresponding to the eutectic of Bowen and Grieg. A 10% Al_2O_3 mixture of mullite and silica began, however, to melt only at 1640°C, in fair agreement, with the theoretical m.p. The phase diagrams of the whole system is shown in Fig. 9. It is clear that aluminosilicate refractories may operate at higher temperatures if the main phases are silica and mullite. There are 9 figures and 2 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (Moscow Institute of Chemical Technology im. D.I. Mendeleyev)

SUBMITTED: March 22, 1962

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; KHOLIN, I.I.; ENTIN, Z.B.

Measurement of cation transfer numbers in the liquid phase of a portland cement clinker. Dokl. AN SSSR 142 no.6:1342-1345 F '62. (MIRA 15:2)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti. 2. Chlen-korrespondent AN SSSR (for Budnikov).
(Portland cement)
(Cations)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; KHOLIN, I.I.; ENTIN, Z.B.

Diffusion coefficients of calcium in the liquid phase in the calcination of Portland cement clinker. Dokl.AN SSSR 144 no.1:180-181 My '62. (MIRA 15:5)

1. Chlen-korrespondent AN SSSR (for Budnikov).
(Portland cement) (Calcium) (Diffusion)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; PANKRATOV, Vl.

Hydraulic activity of certain crystalline and vitreous phases of blast-furnace slags. Dokl. AN SSSR 146 no.1:156-159 S '62. (MIRA 15:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti. 2. Chlen-korrespondent AN SSSR (for Budnikov). (Slag)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; PANKRATOV, V.L.; KEVESH, Ye.P.

Reactivity and hydraulic activity of slag glass. Dokl. AN SSSR 146 no.2:415-417 S '62. (MIRA 15:9)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti.
(Slag) (Glass)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

MATVEYEV . .A., prof., doktor tekhn. nauk, otv. red.; BUDNIKO
P.P., akademik, red.; TOROPO , N.A., red.; GLUSHKOVA,
V.B., kand. khim. nauk, red.; ZUYEVA, V.F., nauchn. red.

[Silicates and oxides in the chemistry of high temperatures]
Silikaty i okisly v khimii vysokikh temperatur. Moskva, In-t khimii silikatov im. I.V.Grebenshchikova. 1963. 382 p.
(MIRA 17:12)

1. Akademiya nauk Ukr.SSR (for Budnikov). 2. Chlen-korrespondent AN SSSR (for Toropov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

GINZBURG, David Borisovich, doktor tekhn. nauk; DELIKISHKIN, Sergey Nikolayevich, kand. tekhn.nauk; KHODOROV, Yevgeniy Iosifovich, kand. tekhn. nauk; CHIZHSKIY, Anatoliy Fedorovich, kand. tekhn. nauk; BUDNIKOV, P.P., akademik, red.; DOBROKHOTOV, N.N., akademik, nauchn. red.[deceased]; KOSYAKINA, Z.K., red.; BOROVNEV, N.K., tekhn. red.

[Kilns and drying apparatus for the silicate industry] Pechi i sushilki silikatnoi promyshlennosti. [By] D.B.Ginzburg i dr. Izd.3., perer. Moskva, Gosstroiizdat, 1963. 342 p. (MIRA 17:2)

1. Akademiya nauk Ukr. SSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

NAGIBIN, G.V.; BUDNIKOV, P.P., akademik, zasl. deyatel' nauki i tekhniki RSFSR i Ukr.SSR, retsenzent; MATVEYEV, M.A., prof., doktor tekhn. nauk, red.; GRONDA, V.I., red.; SHVETSOV,S.V., tekhn. red.

[Principles of building materials technology] Osnovy tekhnologii stroitel'nykh materialov. Pod red. M.A.Matveeva. Vladimir, Rosvuzizdat, 1963. 363 p. (MIRA 16:5)

1. Akademiya nauk Ukr.SSR, chlen-korrespondent Akademii nauk SSSR (for Budnikov).

(Building materials)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

KUZNETSOV, Aleksey Matveyevich; BUDNIKOV, P.P., akad., red.; OVSYANNIKOVA, Z.G., red.; MURASHOVA, V.A., tekhn. red.

[Technology of binding substances and of products made from them] Tekhnologiia viazhushchikh veshchestv i izdelii iz nikh. Pod obshchei red. P.P.Budnikova. Moskva, Vysshaia shkola, 1963. 454 p. (MIRA 16:12)
(Binding materials)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; STRELKOV, M.I.; PLAKSINA, F.Ye.

Content of sulfides in granulated blast furnace slags. Izv. AN SSSR. Met. i gor. delo no.5:80-83 S-O '63. (MIRA 16:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

S/063/63/008/002/004/015
A057/A126

AUTHORS: Budnikov, P.P., Academician of the Academy of Sciences, UkrSSR, Cherepanov, A.M., Candidate of Technical Sciences

TITLE: Some compounds of zirconium and fields of their application

PERIODICAL: Zhurnal vsesoyuznogo khimicheskogo obshchestva imeni D.I. Mendeleyeva, v. 8, no. 2, 1963, 141 - 148

TEXT: The production, properties, and possibilities for application of zirconium compounds are discussed based on appropriate international literature. There are 2 figures and 2 tables.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik

Activity of the Ukrainian Board of the D.I. Mendeleev All-Union Chemical Society. Zhur. VKHO 8 no.5:568-569 '63. (MIRA 17:1)

1. Akademiya nauk UkrSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; GORYAYNOV, K.E., prof.

The 7th International Conference on Silicates in Hungary. Zhur. VKHO 8 no.6:678-680 '63. (MIRA 17:2)

1. Akademiya nauk UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; VOLAROVICH, M.P.; POLINKOVSKAYA, A.I.; YAVITS, I.N.

Study of the character of the expansion of some types of volcanic, hydrated glass by means of motion-picture filming. Stroi.mat. 9 no.3:31-33 Mr '63. (MIRA 16:4)
(Perlite (Mineral)) (Motion-picture photography)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; GULINOVA, L.G., kand. tekhn. nauk; TROTSKO, T.T., kand. tekhn. nauk; ARTEMTSEV, V.P., inzh.; MARCHENKOVA, N.M., inzh.

Obtaining silicate-slag concrete products using two-stage hydrothermal hardening. Stroi. mat. 9 no.5:8-9 My '63. (MIRA 16:7)

1. Akademiya nauk UkrSSR (for Budnikov).
(Sand-lime products)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; ZIL'BERFARB, P.M., inzh.

Perlite as an active mineral additive. Stroi. mat. 9 no.7: 29-31 Jl '63. (MIRA 16:11)

1. Akademiya nauk Ukrainskoy SSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; ZIL'BERFARB, P.M., inzh.

Kinetics of the hydration of lime in sand-lime mixtures. Stroi.mat. 9 no.9:36-39 S '63. (MIRA 16:10)

1. AN UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; EL'-RAFIY, E.A.

Magnesite refractory with a high content of calcium oxide.
Ogneupory 28 no.8:371-377 '63. (MIRA 16:9)

1. Khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; AZAROV, K.P.; KESHISHYAN, T.N.

Crystallization of perlite-based glass. Ukr. khim. zhur. 29 no.11:1215-1219 '63. (MIRA 16:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

S/080/63/036/002/004/019
D205/D307

AUTHORS: Budnikov, P. P. and Shishkov, N. V.

TITLE: On the theory of the crystallization of thermoplastic slips during casting and freezing

PERIODICAL: Zhurnal prikladnoy khimii, v. 36, no. 2, 1963, 272-283

TEXT: The present work was motivated by the absence of theoretical background relating to the crystallization of ceramic slips and to the mutual relations of main technological factors. The most important process during the production of semifinished slip-cast articles with a thermoplastic bond is crystallization of the slip on metallic or other surfaces. The condition for full slip crystallization in a non-cooled mold is, for a periodic process, that $Q_s \leqslant Q_m$, where Q_s and Q_m are respectively the quantities of heat extracted from the slip and mold; the greater this inequality the more rapidly will the slip crystallize. Kinetics of the formation of castings are discussed mathematically by considering the heat transfer slip → casting → mold, taking into account the

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casting conditions and geometry of the article. It is shown that calculation of technological parameters and optimum casting conditions is feasible in simple cases (water-cooled molds, continuous processes). Validity of certain derived relationships was confirmed experimentally on slips of Al_2O_3 and BeO suspended in a mixture of paraffin and beeswax. There are 7 figures and 7 tables.

SUBMITTED: Ma; 10, 1962

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.

Bibliography. Zhur. prikl. khim. 36 no.4:935-936 Ap '63.
(MIRA 16:7)

(Cement)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 12644-63 EWP(q)/EWT(m)/BDS AFFTC/ASD WH

ACCESSION NR: AP3002703 S/0080/63/036/005/1064/1068

AUTHOR: Budnikov, P. P.; Keshishyan, L. T.; Volkova, A. V. 54

TITLE: Effect of small additions on kinetic process of mullite formation at reduced temperatures

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 5, 1963, 1064-1068

TOPIC TAGS: mullite formation, ceramics

ABSTRACT: Mullite $3Al_2O_3 \cdot 2SiO_2$, the most important alumosilicate mineral of ceramic production, was studied to determine the effects of ten additions of various cations with ionic radii from 0.20 to 1.43 Angstroms. It was found that the first crystal phase is Al_2O_3 (over 850C). Introductions of additions of various cations changes this process. Mullite develops above 1140C suggesting that the temperature of the start of the process of mullite formation is below this boundary. Additions of cations of Group 2 of the periodic table considerably accelerates mullite formation. Elements of Group 8 of the periodic table (Fe sup 3 plus and Ni sub 2 plus) retard mullite formation. Orig. art. has: 2 tables.

ASSOCIATION: none

SUBMITTED: 02 Oct 62 DATE ACQ: 24 Jul 63 ENCL: 00

SUB CODE: CH NO REF SOV: 009 OTHER: 004

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; PETROVYKH, I.M.

Zeolites, the molecular sieves. Priroda 52 no.7:32-37 Jl '63.
(MIRA 16:8)

1. Chlen-korrespondent AN SSSR (for Budnikov).
(Zeolites)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; YANOVSKIY, V.K., kand. tekhn. nauk

Ceramics. Priroda 52 no.11:32-38 '63. (MIRA 17:1)

1. Chlen-korrespondent AN SSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

44560
S/020/63/148/001/018/032
B101/B186

AUTHORS: Budnikov, P. P., Academician AS UkrSSR, Royak, S. M., Malinin, Yu. S., Mayants, M. M.

TITLE: Study of the kinetics of hydration of Portland cement clinker minerals in hydrothermal processing

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 148, no. 1, 1963, 91-94

TEXT: The degree of hydration of $2CaO \cdot SiO_2$, $3CaO \cdot SiO_2$, $3CaO \cdot Al_2O_3$, and $4CaO \cdot Al_2O_3 \cdot Fe_2O_3$ was calculated from the content of non-hydrated phase determined by x-ray diffraction analysis: $L = 100 - A/100 + mA$, where L is the degree of hydration, A the content of non-hydrated phase, and m the stoichiometric coefficient for the water content of the fully hydrated material. The empirical equation $L = K \log \tau - B$ was found, where τ is the time, K a factor depending on temperature and other experimental conditions, and B a constant proportional to the induction period of hydration. The equation describes the hydration of the principal amount (20-80%) of the individual compounds investigated, and

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

their mixtures and the alite phase of Portland cement. Its use simplifies the study of cement hydration. Further investigations are being carried out for combined setting, i.e., short-termed hydrothermal processing and subsequent setting at room temperature. There are 4 figures and 3 tables. The most important English-language reference is: S.Brunauer, L. Copeland, R.H. Bragg, J.Phys.Chem.,60,no.1,112 (1956).

ASSOCIATION: Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti (All-Union State Scientific Research Institute of the Cement Industry)

SUBMITTED: September 11, 1962

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; ROYAK, S.M.; MAYANTS, M.M.; MALININ, Yu.S.

Occurrence of an intermediate phase during the hydration of tricalcium silicate subjected to hydrothermal treatment. Dokl. AN SSSR 150 no.1:136-139 My '63. (MIRA 16:6)

1. AN UkrSSR i chlen-korrespondent AN SSSR (for Budnikov).
(Calcium silicates) (Hydration)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; EL'-RAFIY, E.A.

Transformation of calcium chromate-chromite to monochromite in a dolomitized magnesite-chromite refractory material. Dokl. AN SSSR 150 no.6:1315-1318 Je '63. (MIRA 16:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva.
2. Chlen-korrespondent AN SSSR (for Budnikov).
(Refractory materials)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; ROYAK, S.M.; KROYCHUK, L.A.

Certain features of clinkerization during the calcination of charges formed by monocalcium hydrosilicate and calcium carbonate. Dokl. AN SSSR 151 no.5:1143-1146 Ag '63. (MIRA 16:9)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti. 2. Chlen-korrespondent AN SSSR (for Budnikov).

(Calcium silicates) (Calcium carbonate)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BU[illegible]TKOV, P.P.; GORSHKOV, V.S.

Increasing the hydraulic activity of blast-furnace slag by the directed crystallization method. Stroi. mat. 10 no.9: 22-23 S '64 (MIRA 18:2)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 61828-65 EWP(e)/EWT(m)/EWG(s)-2/EWP(t) Pw-4 WH

AM5009851 BOOK EXPLOITATION UR/

27
26
13+1

Ihdnikov, Petr Petrovich (Academician of the Academy of Sciences of the Ukrainian S.S.R.; Corresponding Member of the Academy of Sciences of the U.S.S.R.; Member of the Polish Academy of Sciences)

Chemistry and technology of silicates (Khimiya i tekhnologiya silikatov), Kiev, Naukova dumka, 64. 0608 p. illus., biblio., index. (At head of title: Akademiya nauk Ukrainskoy SSR) Errata slip inserted. 3,600 copies printed.

TOPIC TAGS: chemistry, physical chemistry, silicate, refractory oxide, cement, adhesive, ceramic product, gypsum rock, slag, structural mineral product

PURPOSE AND COVERAGE: The book examines major problems in the chemistry and technology of silicates. The material includes papers on a series of highly refractory oxides of theoretical and practical importance and research data on the chemistry and technology of cements, slag, gypsum, and building materials. The book isintended for engineering, technical, and scientific personnel engaged in research and processing of various engineering materials and may be of assistance to instructors and advanced students at institutions of higher learning entering research in chemistry and technology of silicates.

Card 1/2

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TABLE OF CONTENTS (abridged):

SUB CODES: MT, GC SUBMITTED: 09Mar64 NO REF SOV: 504

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

CHERNYANOV, Aleksandr Mikhaylovich; TRETYAKOV, Sergey Gleboviche; BUDNIKOV, P.P., akademik, red.

[Highly refractory materials and products made of oxides] Vysokoogneupornye materialy i izdeliia iz okislov. Izd.2., perer. i dop. Moskva, Izd-vo "Metallurgiia," 1964. 400 p. (MIRA 17:7)

1. Akademiya nauk Ukr.SSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P. P.; YANOVSKIY, V. K.

"O spekanii okisi magniya."

report submitted for 35th Intl Cong, Industrial Chemistry, Warsaw, 15-19 Sep 64.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 20356-65 EWP(e)/EWP(b)/EPA(s)-2/EWT(m)/EPF(n)-2/EPA(w)-2/T Pab-10/Pt-10/ 40
ACCESSION NR: AP4049088 Pu-4 WH S/0072/64/000/011/0024/0026 39 38

AUTHOR: Budnikov, P.P. (Academician AN UkrSSR), Shishkov, N.V. (Candidate of technical sciences)

TITLE: The criterion of homogeneity, semifinished ceramic, nonhomogeneity coefficient, control automation

SOURCE: Steklo i keramika, no. 11, 1964, 24-26

TOPIC TAGS: ceramic homogeneity, semifinished ceramic, nonhomogeneity coefficient, control automation 15

ABSTRACT: The various means and formulas used for the control of homogeneity are evaluated and found unsatisfactory, since they do not take the size of the article into account. A constant representing the ratio of the size of the test specimen to that of the object whose nonhomogeneity has to be determined is suggested and the formula for finding the specimen volume is presented. The mean homogeneity of the object is determined by finding the mean square deviation from the mean density. The coefficient of nonhomogeneity (R) is determined as the relative mean square deviation of local density values from the density value of the whole object; this is expressed in percent and its formula is shown. The smaller the objects the lower the accuracy of R, due to errors

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L 20356-65
ACCESSION NR: AP4049088

committed in measuring the specific gravity. A table presents experimentally determined nonhomogeneity coefficients for a number of commercially available ceramic items (bricks, corundum, glass, ferrite, etc.). Under manufacturing conditions, the control of homogeneity may be automated, taking as a standard the required weight of the semifinished material with admissible deviations, provided it meets other technological requirements. While automatic control is now applied in the manufacture of finished refractories, this should also be done for semifinished and starter materials. Orig. art. has: 1 table and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, IE

NO REF SOV: 008 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

[redacted]

BUDNIKOV, P.P., akademik

Fundamental work on natural pigments. Stroi.mat. 10 no.4:37 Ap '64. (MIRA 17:5)

1. Akademiya nauk UkrSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

ACCESSION NR: AP4024809 Z/0013/64/000/003/0063/0068

AUTHOR: Budnikov, P. P. (Academician, Moscow); Maslennikova, G. N. (Moscow)

TITLE: Effect of silica upon the mechanical strength of electrotechnical porcelain

SOURCE: Sklar a keramik, 14 no. 3, 1964, 63-68

TOPIC TAGS: silica, porcelain, electrotechnical porcelain, porcelain mechanical strength, ceramics, insulator

ABSTRACT: The effect of silica upon the mechanical strength of porcelain has been investigated by many authors, but there is no uniform agreement among them concerning this. For this reason, authors made a detailed analysis of the effect of silica upon the mechanical strength of porcelain. Electrotechnical grade porcelain was used. Feldspar was substituted with silica. The starting composition was 45.3% clay, 19.8% silica, 33.5% feldspar, and 1.4% impurities. Silica content in the test batches rose from 19.8 to 34.7%. Findings show that an increase in silica of a definite size consist (average particle size not exceeding 20 μm) in the batch composition increases its mechanical strength. This is accompanied by an increase in the porcelain's modulus of elasticity, whose value in the equation

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ACCESSION NR: AP4024809

$$\sigma = 1.66 \times 10^{-3} \times E - 200 \ (kg/cm^2)$$

is for static bending strength. An increase of the silica size consist in the porcelain material also increases the homogeneity of its structure and its electromechanical properties. Orig. art. has: 9 figures, 11 equations and 5 tables.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 17Apr64 ENCL: 00

SUB CODE: MA NO REF SOV: 014 OTHER: 031

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; EL-RAFIJ, E.A.

Transformation of calcium-chromate-chromite into monochromite in dolomitic magnesite chromium refractory materials. Epitoanyag 16 no. 2:63-66 F '64.

1. Moszkvai Egyetem.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; SOKHATSKAYA, G.A.; SHUBIN, V.I.

Insulating the refractory lining in the clinkering zone of rotary cement kilns. Ogneupory 29 no.11:508-513 '64.

(MIRA 18:1)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut tsementnov promyshlennosti.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; SHAKHMAGON N.V., kand. tekhn. nauk; ENTIN, Z.B., kand. tekhn. nauk

Effect of sodium fluosilicate on the viscosity of the clinker liquid phase. TSement 30 no.1:6-8 Ja-F '64. (MIRA 17:8)

1. Chlen-korrespondent AN SSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik

Reviews and bibliography. Tsement 30 no.3:p.3 of cover My-Je '64.
(MIRA 17:11)

1. Akademiya nauk UkrSSR. Chlen-korrespondent AN SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; AZELITSKAYA, R.D., kand.tekhn.nauk; PRIKHODCHENKO, N.A., inzh.

Improvement in the structural properties of cement. TSement 30 no.6:5-7 N-D '64. (MIRA 18:1)

1. AN UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 41518-65 EWP(e)/EPA(s)-2/EWT(m)/EWP(i)/EPF(n)-2/EPA(w)-2/EWP(b)
ACCESSION NR: AP4047604 Pab-10/ S/0073/64/030/009/0986/0991
Pt-10/Pu-4 WH

AUTHOR: Budnikov, P. P.; Keshishyan, T. N.; Volkova, A. V.

TITLE: Effect of certain additives on the sintering of mullite

SOURCE: Ukrainskiy khimicheskiy zhurnal v. 30, no. 9, 1964, 986-991

TOPIC TAGS: mullite, sintering, BeO additive, MgO additive, CaO additive, mullite crystal structure

ABSTRACT: The addition of up to 5% BeO, MgO or CaO had different effects on the sintering of mullite and the character of its crystallization. Samples containing 5% BeO, MgO or CaO calcined at 1750C (sintering was not attained at lower temperatures) had densities of about 90% of theoretical. Petrographic studies of the samples containing 5% of the different additives and calcined at 1750C established that there were no other crystalline phases except the mullite. X-ray analysis confirmed absence of other crystalline phases. The deviations from the normal line intensity relationships in the x-ray diagrams led to the assumption

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0

that the additives were embedded in the mullite lattice. The ability to embed decreased with increasing atomic weight and ionic radius of the additive cation. The additives lowered the fusion temperature of the mullite very little. In mullite samples with no additive or in BeO containing mullite, the structure contained no glass and consisted of sharp needle-like crystals. The mullite containing 5% CaO contained visible amounts of glass and uneven crystals. Orig. art. has: 6 figures and 2 tables

ASSOCIATION: None

SUBMITTED: 03Mar64 ENCL: 00

SUB CODE: MM NO REF SOV: 004 OTHER: 004

mc
Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; SHUBIN, V.I.

Investigation of the electrical conductivity of raw cement charges and their mixtures with basic refractories at high temperatures. Ukr.khim.zhur. 30 no.11:1216-1223 '64.
(MIRA 18:2)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

ACCESSION NR: AP4040524 S/0080/64/037/006/1247/1256

AUTHOR: Budnikov, P. P.; Yanovskiy, V. K.

TITLE: The electric conductivity of polycrystalline spectrally pure magnesium oxide.

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 6, 1964, 1247-1256

TOPIC TAGS: magnesium oxide, electric conductivity, polycrystalline magnesium oxide, monocrystalline magnesium oxide, magnesium ion migration, magnesium ion diffusion, high density magnesium oxide, low density magnesium oxide, p type conductivity, porosity, impurity

ABSTRACT: The electric conductivity was determined of dense sintered samples of spectrally pure (less than 0.001% impurities) magnesium oxide, without additives and with the addition of 0.1 atom% or more of cations of different valency and electron shell structure: Zn, Ni, Fe, Sc, Ti and Zr. The electric conductivity of pure high density MgO (having density over 96% of theoretical) at temperatures above 850-900C does not differ from the electric conductivity of MgO monocrystals, appears to be inherent and determined by the migration of Mg cations (as indicated

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ACCESSION NR: AP4040524

by comparison with data on the diffusion of Mg in MgO monocrystals). The effect of additives on the electric conductivity of MgO depends to a large extent on the valency and other crystallochemical properties of their cations. Addition of 0.1-0.5 at.% of Zr or Ti cations practically does not affect the electric conductivity even though they play a significant role in accelerating the sintering of MgO and change its microstructure and density on recrystallization. This indicates that the tetravalent cations even up to 1600C remain bound with the cation vacancies formed by their entering the MgO crystal lattice. Addition of the trivalent cations Sc and Fe significantly increased the electric conductivity of MgO especially at relatively low temperatures. The effect of temperature and concentration of Fe cations (from 0.1-2.0 at.%) on the conductivity of the samples heated in air to above 900C is expressed by the empirical formula

$$\sigma = 0.63C^{\frac{3110}{T}-1}\exp\left(-\frac{0.82}{kT}\right),$$

where C is expressed in atom parts of Fe cations and T is in degrees K. The conductivity of these samples increases sharply at the start of the transition of the Fe cations to the Fe^{2} state, and is apparently the p-type. The electric conductivity of relatively low density (85-91% of theoretical) polycrystalline MgO with

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ACCESSION NR: AP4040524

considerable open porosity does not differ, on addition of 0.1-0.5 at.% Zn or Ni, from the electric conductivity of pure MgO at high temperatures. But below 1050-1150C the electric conductance increases, appears to be on the surface and basically depends on the microstructure of the samples and not on the type or amount of cation impurity. Orig. art. has: 8 figures, 2 tables and 3 equations.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemical-Technological Institute)

SUBMITTED: 30Oct63 ENCL: 00

SUB CODE: IC NO REF SOV: 006 OTHER: 020

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; AZELITSKAYA, R.D.

Effect of certain factors in the preparation of raw material on the microstructure of cement clinkers. Zhur.prikl.khim. 37 no.7:1409-1414 Jl '64. (MIRA 18:4)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

ACCESSION NR: AP4043759 S/0080/64/037/008/1649/1657

AUTHOR: Budnikov, P.P.; Zlochevskaya, K.M.

TITLE: Synthesis of mullite-spinel ceramics and a study of its properties

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 8, 1964, 1649-1657

TOPIC TAGS: mullite, spinel, quantitative analysis, primary crystallization, equi-molecular state

ABSTRACT: In the capacity of a basic substance the authors have used in their experiments chemically pure reagents. The synthesized spinel was roasted at a temperature of 1480°C over a period of 6 hours. Mullite was obtained by caking a mixture of SiO_2 and Al_2O_3 with a particle dimension of about 1μ at a temperature of 1480°C over a period of 8 hours. Basic magnesium carbonate in an amount of 1 md. percent was used as a mineralizer. An X-ray study of the cake has shown a 100 percent content of mullite. The quantitative analysis of the crystalic phases was carried out by X-ray using the URS-50 device with a copper anti-cathode in the presence of K_α-radiation. The authors concluded that corundum is the primary crystallic phase during the cooling process of the binary system mullite-spinel. The decay of mullite is accompanied by the formation of a liquid from which corundum crystals are

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

ACCESSION NR: AP4043759

separated. A study of the physical-technical properties of ceramic materials in this binary system has shown that mullite-spinel compounds cake to a zero water absorption point at a temperature of 1550-1630°C. In addition densely caked mullite-spinel materials possess characteristics of high durability and good dielectric properties. Orig. art. has: 8 figures and 2 tables

ASSOCIATION: none

SUBMITTED: 25Oct63

SUB CODE: OC, MT

NO REF SOV: 006

ENCL: 00

OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 23519-65 EPF(n)-2/EPA(s)-2/EPA(w)-2/EWT(m)/EPA(bb)-2/EWP(b)/EWP(e) Pq-4/
Pt-10/Pu-4/Pab-10 WH/WW

ACCESSION NR: AP4047116 S/0080/64/037/010/2093/2107

AUTHOR: Budnikov, P. P.; Cherepanov, A. M.

TITLE: The crystallization of glasses and melts

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 10, 1964, 2093-2107

TOPIC TAGS: glass, crystallization, nucleation, kinetics, mechanism, literature review, pyroceram, light sensitive glass, heat treatment, glass microstructure

ABSTRACT: This review of the domestic and foreign literature relates to the nucleation and crystallization of glasses and melts. Topics covered include descriptions of the crystallization phenomenon, its effect on the mechanical strength and thermal stability of glass, and the improvement in mechanical strength by chemical and heat treatments; pyroceramsS, light-sensitive glasses, crystalline glass materials based thereon, and their classification according to the type of catalyst with which the nucleation centers are formed; effect of heat treatment conditions on electrical properties; the microstructure of glass and

Card 1/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

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ACCESSION NR: AP4047116

the dependence of mechanical strength on the crystal dimensions; methods for obtaining crystalline vitreous materials; and the mechanism and kinetics of nucleation and crystal growth. Orig. art. has: 2 tables and 3 figures

ASSOCIATION: None

SUBMITTED: 25Jan64 ENCL: 00

SUB CODE: MT NO REF SOV: 016 OTHER: 027

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; EPSHTEYN, E. Ya.

Processes involved in the solidification of portland cements when concretes are undergoing hydrothermal treatment under atmospheric pressure. Dokl. AN SSSR 155 no. 4:916-919 Ap '64. (MIRA 17:5)

1. Chlen-korrespondent AN SSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P. P.; ZIOCHEVSKAYA, K. M.

ynthesis and properties of mullite-spinel ceramics. Dokl. AN SSSR 156 no. 1:158-161 My '64. (MIRA 17:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva.
2. Chlen-korrespondent AN SSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; ROYAK, S.M.; KROYCHUK, L.A.

Effect of the mineralizer on the production of highly active clinker from the wastes of the complex processing of nepheline rocks. Dokl. AN SSSR 157 no.5:1206-1209 Ag '64.

(MIRA 17:9)

1. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy institut tsementnoy promyshlennosti. 2. Chlen-korrespondent AN SSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 23527-65 EWG(j)/EPA(s)-2/EWT(m)/EWP(e)/EPF(c)/EPF(n)-2/EPR/EPA(w)-2/EPA(bb)-2/EWP(b)/EWP(t) Pab-10/Pr-4/Ps-4/Pt-10/Pu-4 IJP(c), WW/JD/WH

ACCESSION NR: AP5000918 S/0020/64/159/004/0872/0875

AUTHOR: Budnikov, P. P.; Matveyev, M. A.; Yanovskiy, V. K.

TITLE: Sintering high-purity manganese oxide

SOURCE: AN SSSR. Doklady, v. 159, no. 4, 1964, 872-875

TOPIC TAGS: high purity manganese oxide, sintering, ceramics, sintering mechanism

ABSTRACT: The investigation of sintering of high-purity manganese which was obtained by baking hydroxite and carbonate of manganese shows that it differs considerably from sintering of less pure material of this oxide. It is possible to obtain ceramics with a density which is about 99% of the theoretical one, by using relatively low temperatures. The optimal temperature of baking is about 600C at a 2 hour exposure. After tempering at 1600C, the density is maximal (3.56 gm/cm^3), the losses minimal (~15%). At different stages of sintering, different processes are instrumental. Orig. art. has: 2 figures and 1 table

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 23527-65
ACCESSION NR: AP5000918

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleeva (Moscow Chemical-Technological Institute)

SUBMITTED: 16Jun64 ENCL: 00 SUB CODE: GC, MT

NR REF SOV: 005 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, Petr Petrovich; GINSTLING, Arkadiy Mikhaylovich, prof. [deceased]; BUDNIKOV, P.P.;

[Reactions in mixes of hard substances] Reaktsii v smesiakh tverdykh veshchestv. 2. ispr. i dop. izd. Moskva, Stroiizdat, 1965. 473 p. (MIRA 18:4)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, Petr Petrovich; GINSTLING, Arkadiy Mikhaylovich, prof. [deceased]; BUDNIKOV, P.P.;

[Reactions in mixes of hard substances] Reaktsii v smesiakh tverdykh veshchestv. 2. ispr. i dop. izd. Moskva, Stroiizdat, 1965. 473 p. (MIRA 18:4)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, Petr Petrovich, zasl. deyatel' nauki i tekhniki RSFSR i Ukrainskoy SSR, prof., doktor tekhn. nauk; MATVEYEV, M.A. prof. otv. red.; BULAVIN, I.A., prof., red.; BUTT, Yu.M., prof., red.; KESHISHYAN, T.N., prof., red.; KUKOLEV, G.V., prof., red.; ROYAK, S.M., prof., red.

[Chemistry and technology of building materials and ceramics] Khimiia i tekhnologiia stroitel'nykh materialov i keramiki. Moskva, Stroiizdat, 1965. 607 p. (MIRA 18:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 25259-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(n)-2/EPA(w)-2/EWP(b) Pab-10/Pt-10/
Pu-4 WH
ACCESSION NR: AP5002931 S/0072/65/000/001/0022/0027 45 44 43

AUTHOR: Budnikov, P.P. (Academician AN UkrSSR), Bulavin, I.A. (Doctor of technical sciences); Belkov, A.P. (Engineer) 15

TITLE: Substitution of feldspar by alkaline wastes in the production of technical porcelain

SOURCE: Steklo i keramika, no. 1, 1965, 22-27

TOPIC TAGS: porcelain, porcelain manufacture, feldspar, alkaline waste, cement kiln waste, potassium oxide, kaolin, potassium phyllite, firing temperature, sintering temperature

ABSTRACT: Alkaline dust from the electrofilters of cement kilns was used in preparing experimental samples of technical porcelain, in order to study and prove the possible substitution of the inadequate supply of feldspar in commercial production of porcelain. Waste of 25-50% K_2O and not more than approximately 1% ferric oxide content was sintered with kaolin (43% cement dust: 57% kaolin) at 1000C to eliminate the solubility of the alkali and to produce a dispersible clinker of the approximate composition of potassium phyllite. Experimental mixtures of 27.42% kaolin, 18.58% clay, 39% highly dispersed quartz sand and 15% clinker gave good plasticity at 22.5-23% water content and 13% shrinkage at 1260-1320C. The use of clinker and quartz sand of up to 30μ particle

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ACCESSION NR: AP5002931

diameter permitted a decrease in the conventional firing temperatures for electrotechnical porcelains by 80-120C. Optimum sintering temperatures were 1180-1200C; blistering and increased porosity due to the thermal decomposition of ferric sulfate occurred only at higher temperatures. Thus, high quality material can be produced in an oxidizing atmosphere, as shown by mechanical testing and microscopic studies. Orig. art. has: 2 tables, 8 figures and 1 formula.

ASSOCIATION: MKhTI imeni D.I. Mendeleyeva

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 001 OTHER: 003

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 52500-65 EWP(e)/EPA(s)-2/EWP(i)/EPA(w)-2/EWP(b) Pab-10/Pt-7 WH
ACCESSION NR: AP5009383 Z/0013/65/000/003/0102/0105

AUTHOR: Budnikov, P.P. (Academician); Bulavin, I.A. (Professor); Belkov, A.F. (Engineer)

35
B

TITLE: Porcelain without feldspar 15

SOURCE: Sklar a keramik, no. 3, 1965, 102-105

TOPIC TAGS: porcelain, high voltage electric porcelain, electric porcelain, frit, fritting, feldspar, electrical flue gas dust collector

ABSTRACT: The article reports on a Soviet investigation of the possibility of using as a fusing agent highly alkaline components of dust collected from the flue gases of cement furnaces by electric dust traps. The investigation is of current importance because the pure feldspar required in the manufacture of electric porcelain are relatively scarce, and even though the composition of flue gases and furnace shaft gases is different in the USSR, the study of the problem is still of interest for Czechoslovakia. The thermogram of a clinker calcined at 1,400°C shows no important phenomena which would indicate the further course of physical chemical processes. The frit is a white, porous substance on which no black spots are visible to the naked eye. The experimentally prepared porcelain paste exhibits all

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ACCESSION NR: AP5009383

the desired properties and at a moisture content of 23% has an elasticity of 0.84, a Volarovi plasticity of $1.8 \cdot 10^{-6}$ sec-1, and a relaxation time of 4,000 sec. Analysis of the data leads to the following conclusions: 1) The experimental pastes are on a level with the usual high-voltage porcelains; 2) the fritting range is 60°C; 3) the fritting of the material begins even before the decomposition of the iron oxide. The fritting which sets in at from 1,180 to 1200°C is optimum. Orig. art. has: figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 00

NO REF SOV: 002

ENCL: 00

OTHER: 003

SUB CODE: MT

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 51076-65 EWG(j)/EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EPR/EPA(w)-2/T/EWP(t)/EWP(b)/EWA(c) Pab-10/Pr-4/Ps-4/Pt-7 IJP(c) JD/JW/JG/WH

ACCESSION NR: AP5010415 UR/0131/65/000/004/0032/0037

AUTHOR: Budnikov, P.P.; Matveyev, M.A.; Yanovskiy, V.K.

TITLE: Sintering of high-purity magnesium oxide with hafnium dioxide admixtures

SOURCE: Ogneupory, no. 4, 1965, 32-37

TOPIC TAGS: magnesium oxide sintering, hafnium dioxide, magnesium diffusion, sintered oxide structure, ceramic density

ABSTRACT: The effect of adding hafnium dioxide (up to 0.3 mole %), the temperature of calcination of the mixture and temperature of firing of the ceramic, and also the kinetics and mechanism of the sintering of magnesium oxide, were investigated. X-ray analysis, metallographic microscopy and electron microscopy were employed. HfO_2 was found to accelerate the sintering appreciably; at 0.1-0.3 mole % HfO_2, a ceramic with a density of 99-100% of the theoretical can be obtained at 1300-1400C. The optimum HfO_2 content is close to 0.25 mole%. Sintering of MgO with this amount of HfO_2 begins at 950C, then the apparent density rapidly increases with the temperature, approaching 3.40 g/cm^3 at 1100C. Accumulative recrystallization at such relatively low temperatures is slow. At 1300C and above, the density of the ceramic comes close to the maximum value in a few minutes. The mechanism of mass transfer during sintering consists in the volume

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L 51076-65
ACCESSION NR: AP5010415

self-diffusion from the grain boundaries to the surface of the grooves formed between them. The activation energy of this process (3.6 eV) at 1100-13[illegible]C and the coefficient of self-diffusion of MgO (6×10^{-14} cm^2/sec at 1100C) correspond to the existing data on the diffusion of magnesium in MgO. "Electron microscopy was carried out by N.M. Vaysfel'd." Orig. art. has: 5 figures, 4 tables, and 1 formula.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (Moscow Chemical Engineering Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, MM

NO REF SOV: 007 OTHER: 002

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 62565-65

ACCESSION NR: AP5012657 UR/0369/65/001/002/0225/0230

AUTHOR: Budnikov, P. P.; Matveyev, M. A.; Kharitonov, F. Ya.

TITLE: Effect of water and high-pressure high-temperature steam on ceramic structural materials

SOURCE: Fiziko-khimicheskaya mekhanika materialov, v. 1, no. 2, 1965, 225-230

TOPIC TAGS: ceramic material, ceramic thermal stability, material strength

ABSTRACT: Corrosion of ceramic materials in water and steam was studied. A wide range of materials were examined: 1) porcelain, the basic crystalline phases of which are mullite and quartz; 2) steatite with calcium silicate alkaline glass phase (TK-21) and low-alkali barium silicate (CK-1); 3) forsterite on an orthosilicate base with a very small amount of clinoenstatite; 4) mullite-corundum and corundo-mullite with crystalline phases in the form of corundum and mullite; 5) corundum with admixtures of 3-7 wt. % of the glass systems $CaO-R_2O_3-SiO_2$ and $CaO-R_2O_3-ZrO_2SiO_2$, where R is boron and aluminum; 6) materials based on pure oxides--aluminum, magnesium, stabilized zirconium dioxide and microlite. Samples were prepared by methods used in industrial production. High pressure autoclaves were used for corrosion

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ACCESSION NR: AP5012657 2

tests. Physico-technical properties of the materials, tested by usual methods are presented. It was found that reduction of strength in ceramic materials under the effect of water and steam is determined by their structure, phase and chemical composition, and is absorptional and chemical in nature. The stability of ceramic materials in water and high-pressure high-temperature steam may be greatly increased by reducing the quantity of glass phase, reducing alkali and alkaline-earth oxides and increasing the density of the material. Materials of pure corundum and stabilized zirconium dioxide have greater stability than porcelain, steatite and others but less than similar materials prepared by hot pressing. The high stability of hot pressed materials is due to their high density (close to crystallographic), and to their chemical inertness. Orig. art. has: 4 figures, 3 tables.

ASSOCIATION: MKhTI im. Mendeleyeva, Moscow 44

SUBMITTED: 23Dec64 ENCL: 00 SUB CODE: MT

NO REF SOV: 003 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; MATVEYEV, M.A.; KHARITONOV, F.Ya.

Interaction of water and high-temperature steam with ceramic materials containing corundum and mullite. Izv. AN SSSR. Neorg. mat. 1 no.6:931-935 Je '65. (MIRA 18:8)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I. Mendeleyeva.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; SAVEL'YEV, V.G., kand. tekhn. nauk; PETROVYKH, I.M., inzh.

Properties of perlite from the Berogovo deposit. Stroi. mat. 11 no.1:24-25 Ja '65. (MIRA 18:6)

1. Akademiya nauk UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; GORSHKOV, V.S., kand. tekhn. nauk

Using aluminothermic slag. Stroi. mat. 11 no.4:30-31 Ap '65.
(MIRA 18:6)

1. Akademiya nauk UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; GAYVARONSKIY, S.Ya.; PETROV, L.K.

Role of gas medium in the formation of the cellular structure of keramzit. Stroi. mat. 11 no.8:32-33 Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; BULAVIN, I.A., doktor tekhn. nauk; BELKOV, A.F., inzh.

Substitution of alkali waste for feldspar in industrial porcelain. Stek. i ker. 22 no.1:22-29 Ja '65. (MIRA 18:7)

1. AN UkrSSR (for Budnikov). 2. Moskovskiy ordena Lenina khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva (for Belkov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.

Fifth issue of Transactions of the Eastern Institute of Refractories. Ogneupory 30 no.4:47 '65.

(MIRA 18:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 36704-65 EEC(b)-2/EWT(1)/EWT(m)/T IJP(c)

ACCESSION NR: AP5003115 S/0080/65/038/001/0010/0017

20
18
B 1

AUTHOR: Budnikov, P. P.; Petrovykh, I. M.

21

TITLE: Effect of certain factors on the crystallization of synthetic sodium zeolite type A

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 1, 1965, 10-17

TOPIC TAGS: sodium zeolite A, crystallization, time, seeding, adsorption characteristic, water adsorption, carbon dioxide adsorption

ABSTRACT: The effects of time and of seeding on sodium zeolite A were investigated. Initial crystal formation occurred almost simultaneously with gel formation when alkali solutions of sodium silicate and sodium aluminate were reacted. Well formed crystals were obtained only after 3 hours aging, but their adsorption properties were still weak. Twelve hours crystallization time was required to obtain an adsorbent with normal sorption properties. The zeolite crystal dimensions increased to 10-11 microns as crystallization time was increased to 48 hours, but this increase in size had little effect on the sorption properties. Seed-

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ACCESSION NR: AP5003115

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ing with materials having a structure approaching that of the synthetic zeolite had little effect on the ultimate size of the crystal product, but did intensity the zeolite formation process. Optimum seeding concentrations were 3% sodium zeolite A with crystal dimensions ~3.5 microns; 3% chabazite with dimensions ~ 3.0-3.5 and 0.1-0.5% chabazite of ~1.5 micron size. Samples seeded with 3% sodium zeolite A had the best adsorption characteristics: maximum sorption capacity was 30 amp/100gm adsorbent, 12-12.5 gm CO_2 at 20C and 20 mm Hg and 21.5 gm CO_2 at 20C and 760 mm Hg. "Adsorption measurements conducted by N. V. Kel'tsevat at the Department of Nitrogen MKhTI im. Mendeleyeva." Orig. art. has: 9 figures

ASSOCIATION: None

SUBMITTED: 16Jan64 ENCL: 00 SUB CODE: GC

NR REF SOV: 008 OTHER: 006

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; SHUBIN, V.I.; LEFESHOVA, V.I.

Nature of adhesion between basic refractories and portland cement clinkers. Zhur.prikl.khim. 38 no.6:1193-1198 Je '65. (MIRA 18:10)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P. (Moskva); KERBE, F.G. (Moskva)

Spinels and spinellids. Priroda 54 no.2:72-75 F '65.

(MIRA 18:10)

1. Chlen-korrespondent AN SSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; SANDULOV, D.B.

Single crystal whiskers of refractory oxides and their use.
Zhur.VKHO 10 no.5:506-511 '65.
(MIRA 18:11)

1. Akademiya nauk UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P., akademik; KROYCHUK, L.A., kand.tekhn.nauk

Use of mineralizers for the intensification of the process of clinker formation. Zhur.VKHO 10 no.5:545-550 '65.
(MIRA 18:11)

1. Akademiya nauk UkrSSR (for Budnikov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 3080-66 EWT(m)/EPF(c)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/JG

ACCESSION NR: AP5024001 UR/0020/65/164/002/0323/0325

AUTHOR: Budnikov, P. P., (Corresponding member AN SSSR); Popov, N. M.; Sandulov, D. B.

TITLE: Use of the superhigh-voltage electron microscope for studying single-crystal whiskers of beryllium oxide

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 323-325, and insert facing p. 307

TOPIC TAGS: beryllium, metal whisker, crystal growth

ABSTRACT: Filamentary crystals of beryllium oxide were grown by high-temperature oxidation of metallic beryllium in an argon atmosphere containing 0.01% N and 0.003% O_2. The moisture content of the argon was 0.03 g/m^3 at 760 mm Hg. The oxidation was done in a quartz glass vessel for 24 hours at 1450-1500°. A grayish white cottony mass was formed on the substrate in direct contact with the metallic beryllium. Microscopic analysis showed that this mass was made up of interwoven individual crystals of BeO from 1 to 10-15 mm in length. The grayish color was caused by the presence of small metal spheres on the ends of the filamentary crystals. In several cases, spiderlike formations were observed consisting of several whiskers attached

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ACCESSION NR: AP5024001 2

radially to a single sphere. A superhigh-voltage electron microscope with an accelerating voltage of 400 kv (electron energy of 557 kev) was used for identification of crystals, determination of the direction of growth and the diameter and for studies by transillumination. Calculations made from point electron-diffraction patterns show lattice parameters identical to those of beryllium oxide. The diameter of the BeO whiskers varies from hundredths of a micron to 4-5 μ. The diameter of the spheres on the ends of the crystals varies from 1 to a few dozen microns. The main direction of growth coincides with axes [000$\bar{1}$] and [10$\bar{1}$0]. Orig. art. has: 4 figures.

ASSOCIATION: Moskovskiy khimiko-tekhnicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical Engineering Institute) 55

SUBMITTED: 02Jun65 ENCL: 00 SUB CODE: SS, OP

NO REF SOV: 002 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

L 13866-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG
ACC NR: AP6002427 SOURCE CODE: UR/0020/65/165/005/1075/1077

AUTHOR: Budnikov, P. P. (Corresponding member AN SSSR); Kushakovskiy, V. I.; Belevantsev, V. S.

ORG: none

41

TITLE: Investigation of the Gd_2O_3-Al_2O_3 and Sm_2O_3-Al_2O_3 systems

SOURCE: AN SSSR. Doklady, v. 165, no. 5, 1965, 1075-1077

TOPIC TAGS: rare earth, samarium, gadolinium, alloy system, alloy phase diagram

ABSTRACT: The authors study the interaction between aluminum oxide and the oxides of samarium and gadolinium below the solidus temperature. Mixtures were prepared by coprecipitation of ammonium from a nitric acid solution of aluminum and gadolinium (samarium) hydroxides with subsequent annealing at various temperatures. A table is given showing data from x-ray phase analysis of these mixtures. The results show that the reaction for formation of $SmAlO_2$ ends at 880°. In the Gd_2O_3-Al_2O_3 system, formation of the compound $GdAlO_3$ passes through a new phase with an unknown structure. Traces of this phase remain even after annealing at 1380°. An-

UDC: 541.123.25

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alysis of the specimens showed that aluminum oxide is not noticeably soluble in $GdAlO_3$ and $SmAlO_3$. It was found that new chemical compounds are formed in annealed alloys containing more than 50 mol % of rare earth oxide. Microstructural analysis shows that a single phase structure arises in compositions containing about 66 mol % of the rare earth oxide. The composition of the new compounds give chemical formulas of $2Gd_2O_3 \cdot Al_2O_3$ and $2Sm_2O_3 \cdot Al_2O_3$. These compounds melt and decompose at 1950° and 1920° respectively. X-ray analysis of the newly synthesized compounds shows that the formation of $GdAlO_3$ perovskite at low temperatures passes through the 2:1 phase. The new compounds have no noticeable region of homogeneity. Both the 1:1 and 2:1 phases are in equilibrium in the range of compositions containing 50-66 mol % of the rare earth oxide. Phase diagrams are given for the Gd_2O_3-Al_2O_3 and Sm_2O_3-Al_2O_3 systems. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 11/ SUBM DATE: 26Jun65/ ORIG REF: 002/ OTH REF: 004

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; NEKHOROSHEV, A.V.

Solid phase reactions in the presence of "carriers" transferring volatile compounds of initial products. Zhur. prikl. khim. 38 no.10:2157-2165 O '65. (MIRA 18:12)

1. Submitted June 18, 1965.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8

BUDNIKOV, P.P.; LYUTSEDARSKIY, V.A.; OMEL'CHUK, L.N.; KOROLENKO,V.A.

Simple unit for the determination of magnetic susceptibility.
Zhur. prikl. khim. 38 no. 10-2326-2327 O '65. (MIRA 18:12)

1. Submitted March 11, 1965.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307310009-8"